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EXAMINER	
MULCAHY, JOHN M	
ART UNIT	PAPER NUMBER
3739	9

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/072,698	Applicant(s) MUESSIG ET AL.
	Examiner John M. Mulcahy	Art Unit 3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 March 2003* .

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 17-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 17-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 6, 18, 22, 26, 30, 34, 38 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amundson et al. (6,178,346)in view of Brucker et al. (5,643,197).

Amundsun et al. shows the catheter substantially as claimed, including:

As to claim 1: An endoscopic catheter 25, 43 adapted for insertion into body cavities, comprising: a distal catheter portion (Fig. 12B); an illumination device 71 for illuminating an area around the distal catheter portion with electromagnetic radiation; an image recording unit 63 for recording an image of the electromagnetic radiation reflected by the area around the distal catheter portion and pass it to a proximal end of the catheter; an image reproduction unit 38, connected to the proximal end of the catheter and adapted to reproduce an image of the recorded electromagnetic radiation, wherein the catheter is adapted controllably for insertion into blood vessels , in particular blood vessels (see the first-third embodiments), and for reproducing the electromagnetic radiation image reflected by the area around the distal catheter portion, with a wavelength for which blood has a high transparency (see the Summary of the Invention).

As to claim 6: the illumination device further comprises an illumination light waveguide 62 from the proximal to a distal catheter end, to pass electromagnetic

radiation serving for illumination purposes from the proximal catheter end to the distal catheter end.

As to claims 18, 22, 26, 30, 34 and 38: the catheter carries an expandable balloon at its distal catheter portion suitably adapted for dilation of constricted blood vessels (angioplasty) and for inserting and expanding stents. See col. 1, line 65, through col. 2, line 43; col. 8, last para.; and the first embodiment.

As to claim 42: the catheter further comprises means for controlling a targeted deflection of the distal end of the catheter, actuable from the proximal end thereof. See col. 32, lines 25-29.

Amundson et al. fails to show an electode adapted for one of delivering/receiving an electrical signal. However, Brucker et al. shows an analogous endoscopic (col. 9, line 66, through col. 10, line 6) catheter 20 adapted for insertion into body cavities, comprising:

As to claim 1: a distal catheter portion 26, adapted controllably for insertion into blood vessels, wherein the catheter is in the form of an electrode line, with an electrode on the distal catheter portion 26, the electrode being adapted for at least one of delivering an electrical signal to body tissue adjoining the distal catheter portion and receiving an electrical signal to body tissue adjoining the distal catheter portion (col. 3, lines 25-51; note monitoring means).

Inasmuch as Amundson et al. teaches the use of their endoscopic catheter in electrical mapping (col. 3, line 46-53), it would have been obvious to the artisan to modify Amundson et al. by adding an electrode to the distal catheter portion as taught

by Brucker et al. since Brucker et al. teach that such catheter would be capable of studies contemplated by Amundson et al.

3. Claims 1, 6, 18, 22, 26, 30, 34, 38 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stelzer et al. (6,309,345) in view of Brucker et al. (5,643,197).

Stelzer et al. shows the catheter substantially as claimed, including:

As to claim 1: An endoscopic catheter 505 adapted for insertion into body cavities, comprising: a distal catheter portion (Fig. 14); an illumination device 3, 4 for illuminating an area around the distal catheter portion with electromagnetic radiation; an image recording unit 1, 2 for recording an image of the electromagnetic radiation reflected by the area around the distal catheter portion and pass it to a proximal end of the catheter (along lines 52); an image reproduction unit (heads-up display, see col. 6, lines 33-38), connected to the proximal end of the catheter and adapted to reproduce an image of the recorded electromagnetic radiation, wherein the catheter is adapted controllably for insertion into blood vessels 701, in particular blood vessels, and for reproducing the electromagnetic radiation image reflected by the area around the distal catheter portion, with a wavelength for which blood has a high transparency (col. 6, lines 58-61).

As to claim 6: the illumination device further comprises an illumination light waveguide 52 from the proximal to a distal catheter end, to pass electromagnetic radiation serving for illumination purposes from the proximal catheter end to the distal catheter end.

As to claims 18, 22, 26, 30, 34 and 38: the catheter carries an expandable balloon 504 at its distal catheter portion suitably adapted for dilation of constricted blood vessels (angioplasty) and for inserting and expanding stents. See col. 13, lines 26-41.

A to claim 42: the catheter further comprises means for controlling a targeted deflection of the distal end of the catheter, actuable from the proximal end thereof. See col. 7, lines 6-25.

Stelzer et al. fails to show an electode adapted for one of delivering/receiving an electrical signal. However, Brucker et al. shows an analogous endoscopic (col. 9, line 66, through col. 10, line 6) catheter 20 adapted for insertion into body cavities, comprising:

As to claim 1: a distal catheter portion 26, adapted controllably for insertion into blood vessels, wherein the catheter is in the form of an electrode line, with an electrode on the distal catheter portion 26, the electrode being adapted for at least one of delivering an electrical signal to body tissue adjoining the distal catheter portion and receiving an electrical signal to body tissue adjoining the distal catheter portion (col. 3, lines 25-51; note monitoring means).

Inasmuch as Stelzer et al. teaches the use of their endoscopic catheter in cauterization (col. 3, line 46-53), it would have been obvious to the artisan to modify Stelzer et al. by adding an electrode to the distal catheter portion as taught by Brucker et al. since Brucker et al. teach that such would add the capability for measuring potentials in biological tissue and suggests that such would be useful in analogous ablation procedures.

4. Claims 2, 3, 7, 8, 15, 16, 19, 20, 23, 24, 27, 28, 31, 32, 35, 36, 39, 40, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stelzer et al. (6,309,345) in view of Brucker et al. (5,643,197) as applied to claims 1, 6, 18, 22, 26, 30, 34, 38 and 42 above, further in view of Roth et al. (6,079,414), which incorporates Fantone et al. (4,786,155) by reference (col. 18, lines 24-26).

Stelzer et al. clearly shows the catheter substantially as claimed, but fails to specify the use of light in the claimed range of wavelengths (claims 2-4). However, Roth et al. show an analogous endoscope in which only those wavelengths of light not absorbed by blood are transmitted into the area of interest. See col. 18, lines 16-27.

As to claim 2: the endoscope reproduces an image recorded in a wavelength range of between 600 and 650 nanometers. *See* Fantone et al., the Summary of the invention.

As to claim 3: the illumination device illuminates the area around the distal catheter portion with infra-red light of a wavelength of between 600 and 650 nanometers. *Id.*

Inasmuch as Stelzer et al. specify the use of wavelengths in which blood provides "the least vision obstruction" (col. 6, lines 58-61), it would have been obvious to the artisan to use the claim wavelengths since Roth et al. teach such to be meet this criteria.

5. Claims 4, 5, 9, 17, 21, 25, 29, 33, 37, 41 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stelzer et al. (6,309,345) in view of Brucker et al.

(5,643,197) and Roth et al. (6,079,414), which incorporates Fantone et al. (4,786,155) by reference (col. 18, lines 24-26), as applied to claims 2, 3, 7, 8, 15, 16, 19, 20, 23, 24, 27, 28, 31, 32, 35, 36, 39, 40, 43 and 44 above, further in view of Adair et al. (4,782,819).

Fantone et al. fail to specify a band-pass filter. Rather, a light source 26 of the desired wavelength is used. However, Adair et al. show an analogous endoscope in which a band-pass filter 172, which only passes the desired frequency, is used. It would have been obvious to the artisan to further modify Stelzer by using a band-pass filter for a frequency within the claimed band since Adair teaches that such is equivalent to the arrangement of Fantone et al. *See* Adair, col. 9, lines 1-22, especially lines 1-6.

Response to Arguments

6. Applicant's arguments with respect to the amended claims have been considered but are moot in view of the new ground(s) of rejection.

Pertinent Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mackin (4,961,738) shows an analogous endoscopic catheter with distal sensing electrodes (Fig. 9).

Final Rejection

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Mulcahy whose telephone number is (703) 308-3134. The examiner can normally be reached on M-F, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. M. Dvorak can be reached on (703) 308-0994. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0873.

John M. Mulcahy
Primary Examiner
Art Unit 3739

John Mulcahy
May 29, 2003